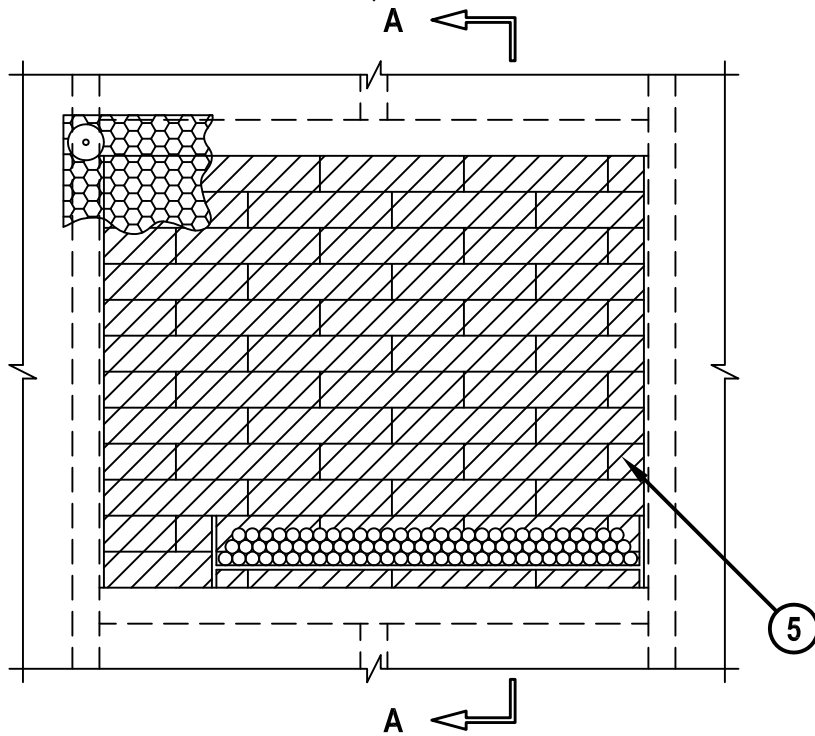


UL/cUL SYSTEM NO. W-L-4081
CABLE TRAY THROUGH GYPSUM WALL ASSEMBLY

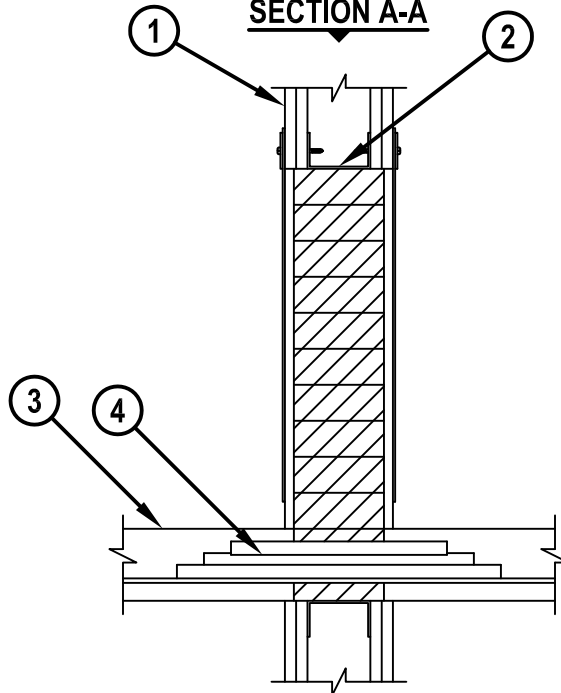
F-RATING = 1-HR. OR 2-HR.
 T-RATING = 0-HR.

WL4081d.020916

FRONT VIEW



SECTION A-A



HILTI, Inc.
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Sheet	1 of 2
Scale	3/32" = 1"
Date	Feb. 09, 2016

Drawing No.

**WL
 4081d**

Saving Lives through Innovation and Education

CABLE TRAY THROUGH GYPSUM WALL ASSEMBLY

F-RATING = 1-HR. OR 2-HR.

T-RATING = 0-HR.

WL4081d.020916

1. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED U300, U400, V400, OR W400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN).
2. WOOD STUDS TO CONSIST OF NOMINAL 2" x 4" LUMBER. STEEL STUDS TO BE MINIMUM 2-1/2" WIDE. OPENING TO BE COMPLETELY "FRAMED-OUT" WITH ADDITIONAL FRAMING MEMBERS.
3. MAXIMUM 24" WIDE x 4" DEEP, ALUMINUM OR STEEL, OPEN LADDER OR SOLID BACK, CABLE TRAY.
4. CABLES TO BE ANY COMBINATION OF THE FOLLOWING :
 - A. MAXIMUM 300 PAIR NO. 24 AWG TELEPHONE CABLE.
 - B. MAXIMUM 750 KCMIL SINGLE CONDUCTOR POWER CABLE.
 - C. MAXIMUM 1/2" DIAMETER FIBER-OPTIC CABLE (24 FIBER).
 - D. MAXIMUM 3/C NO. 12 AWG METAL-CLAD CABLE.
5. HILTI CFS-BL FIRESTOP BLOCK (2" THICK x 8" WIDE x 5" DEEP, REFERENCE : FRONT VIEW) FIRMLY PACKED AND CENTERED WITHIN WALL.

NOTES :

1. MAXIMUM SIZE OF OPENING = 900 SQ. IN., WITH A MAXIMUM DIMENSION OF 30".
2. ANNULAR SPACE [FOR STEEL STUD WALLS] = MINIMUM 0", MAXIMUM 26".
3. ANNULAR SPACE [FOR WOOD STUD WALLS] = MINIMUM 1", MAXIMUM 26".
4. CABLES TO FILL MAXIMUM 45% OF CROSS-SECTIONAL AREA OF CABLE TRAY BASED ON A MAXIMUM 3" CABLE LOADING DEPTH.
5. APPLY HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT, HILTI CP 618 FIRESTOP PUTTY STICK, HILTI CP 620 FIRE FOAM, OR HILTI CP 660 FIRESTOP FOAM IN ANY VOID THAT MAY EXIST (INTO INTERSTICES OF CABLES, BETWEEN CABLES AND CABLE TRAY, OR BETWEEN FIRESTOP BLOCKS), TO MAXIMUM EXTENT POSSIBLE.
6. FOR WALLS CONSTRUCTED OF STEEL STUDS LARGER THAN 3-5/8", FIRESTOP BLOCKS SHOULD BE INSTALLED 8" DEEP. FIRESTOP BLOCKS MAY BE RECESSED MAXIMUM 1/2" FROM SURFACE OF WALL.
7. WHEN ANNULAR SPACE EXCEEDS 12", A NOMINAL 1" HEXAGONAL STEEL WIRE MESH (20 GA. OR HEAVIER) OR NOMINAL 2" x 2" STEEL WIRE MESH (16 GA.) SHALL BE ATTACHED TO BOTH SIDES OF THE WALL BY MEANS OF 1/4" HILTI TOGGLER BOLTS WITH 1-1/2" DIAMETER FENDER WASHERS (SPACED MAX. 8" C/C) OR ATTACHED TO STEEL STUDS WITH STEEL SCREWS AND 1-7/16" DIAMETER FENDER WASHERS (SPACED MAX. 6" C/C). STEEL WIRE MESH SHALL BEGIN MAXIMUM 2-1/2" FROM THE PENETRANT AND OVERLAP MINIMUM 3" BEYOND THE PERIPHERY OF THE OPENING.
8. [NOT SHOWN] AS AN ALTERNATE TO WIRE MESH, STEEL PLATE (MIN. 22 GA.) MAY BE USED. STEEL PLATE SHALL BE ATTACHED TO STEEL STRUTS (13/16" DEEP x 12 GA.) WITH 1/4" DIA. STEEL NUTS (SPACED 8" C/C). STRUT SHALL BE SECURED TO BOTH SURFACES OF THE WALL ASSEMBLY WITH 1/4" DIA. TOGGLER BOLTS OR ATTACHED TO STEEL STUDS WITH STEEL SCREWS AND WASHERS (SPACED MAX. 12" C/C).



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